

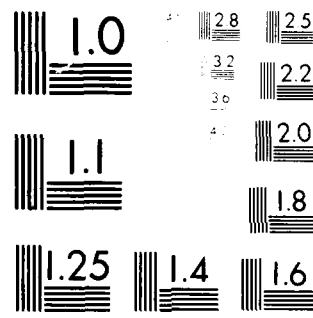
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SEMI-ANNUAL REPORT TO CONGRESS
ON THE
EFFECTIVENESS OF THE CIVIL AVIATION SECURITY PROGRAM



JANUARY 1 - JUNE 30, 1977

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
CIVIL AVIATION SECURITY SERVICE

82 02 01 152



THE SECRETARY OF TRANSPORTATION

WASHINGTON, D.C. 20590

OCT 31 1977

Honorable Thomas P. O'Neill, Jr.
Speaker of the House of Representatives
Washington, D.C. 20515

Dear Mr. Speaker:

I am pleased to forward the Federal Aviation Administration's Semi-Annual Report to Congress on the effectiveness of the Civil Aviation Security Program. This report, covering the period January 1 - June 30, is submitted in accordance with Public Law 93-366 signed by the President on August 5, 1974.

The actions reflected in this report, particularly the significant increase in foreign air carrier hijackings, clearly indicate that the hijacking and sabotage threat persists and that effective security measures remain necessary. The 16 air carrier hijackings (2 U.S. and 14 foreign) that occurred throughout the world in the first six months of 1977 equal the total for all of 1976. Criminal acts against civil aviation throughout the world resulted in 14 deaths and 42 injuries in the first six months of 1977. One death and two injuries involved U.S. civil aviation.

In response to the rising number of foreign hijackings, we have emphasized to the international aviation community the need for effective and ongoing screening procedures along with adequate training and supervision of screening personnel. An offer has also been made to make available to other nations procedures used by the U.S. to assure effective operation of screening equipment.

The report presents convincing evidence that the U.S. Civil Aviation Security Program is capable of meeting and containing the current threat. The conscientious implementation of the program by the aviation industry, coupled with the continuing understanding and support of airline passengers, has contributed immeasurably to its success. All parties involved will continue cooperative efforts to maintain this high level of security while seeking new ways to improve the system.

A report has also been sent to the President of the Senate.

Sincerely,

A handwritten signature in dark ink, reading "Brock Adams", is written over a large, stylized circular flourish.

Brock Adams

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I. INTRODUCTION

This is the sixth Semi-Annual Report to Congress on the Effectiveness of the Civil Aviation Security Program. It covers the six-month period January 1 - June 30, 1977, and is submitted pursuant to Section 315(a) of the Federal Aviation Act as amended by the Air Transportation Security Act of 1974 (Public Law 93-366).

The report includes an analysis of the current threat against civil aviation along with information on hijacking attempts, security incidents, bomb threats, and passenger screening activity. It also summarizes ongoing activities to assure adequate protection of civil air commerce against hijacking/sabotage and related crimes, and other aspects of the Civil Aviation Security Program.

II. EXECUTIVE SUMMARY

The Threat. Sixteen air carrier hijackings worldwide during the first six months of 1977--equal to the total for all of 1976--indicate that the hijacking threat persists, and that effective civil aviation security measures remain necessary. Contributing to the seriousness of the hijacking and sabotage threat are the continuing acts of terrorism, especially in Europe, the Middle East, and South America and the increasing cooperation between terrorist organizations in various parts of the world.

During the first six months of 1977, 33 criminal acts against civil aviation occurred throughout the world, resulting in 14 deaths and 42 injuries. Eight of the incidents, resulting in 1 death and 2 injuries, involved U.S. civil aviation. Since 1974 worldwide criminal acts against civil aviation have resulted in 499 deaths and 463 injuries, with 112 deaths and 105 injuries involving U.S. civil aviation.

Incidents. During the period covered by this report there were two U.S. air carrier hijackings, both unsuccessful, and one unsuccessful U.S. general aviation hijacking. In each case the hijackers were overpowered or apprehended before they could successfully take control of the aircraft.

In comparison to the U.S. record, there were 14 foreign air carrier hijackings--7 of which were successful. The 14 foreign hijackings are twice the number reported during the last six months of 1976. In the case of the non-U.S. hijackings, it appears that most of the weapons involved were introduced through the normal passenger boarding process.

and should have been detected and prevented from being carried aboard by effective passenger and carry-on baggage screening procedures. In contrast to the foreign experience, none of the U.S. hijackings since 1973 were caused by actual firearms or explosives passing through passenger screening points.

With 3 more foreign air carrier hijackings during the first 10 days of July, bringing the 1977 total to 19, FAA issued an advisory bulletin to the international aviation community highlighting this upward trend and emphasizing the need for effective and ongoing screening procedures along with adequate training and supervision of screening personnel. This bulletin was followed by an offer to make available to other nations standards and procedures used by the U.S. to assure effective operation of screening equipment.

On April 23 a custodial employee at Washington National Airport was killed by a bomb explosion in a locker room under the main terminal. Two other explosions damaged helicopters in Salinas, California, and wounded a maintenance employee in Swainsboro, Georgia. Also, an anti-Castro organization claimed responsibility for the bombing of Mackey Airlines' offices in Ft. Lauderdale, Florida, because the airline was considering scheduled passenger flights to Cuba.

Over 850 bomb threats were directed against U.S. aircraft and airports. The threats resulted in at least 120 aircraft flight delays or diversions, 30 airport facility evacuations and 400 airport and aircraft searches.

Perhaps the best evidence of the effectiveness of airline and airport security measures is the number of hijackings and related crimes prevented. While this number cannot be determined with certainty, the circumstances involved in at least two incidents during this reporting period support a judgment that the persons involved intended to commit hijackings or related crimes and were prevented from doing so by the security procedures in effect. Since January 1, 1974, an estimated 72 hijackings or related crimes are believed to have been prevented.

Passenger Screening. Additional evidence of program effectiveness is found in the results of current passenger screening procedures which continue to prevent weapons and dangerous articles from being carried aboard aircraft.

During the period covered by this report, 745 handguns were detected in the screening process. In 370 cases they were detected under circumstances which led to the arrest of individuals involved. Of those arrested, 359 were charged with violations of local laws and 11 were charged with violations of Federal statutes.

The number of firearms detected decreased from the last reporting period. One reason for the decrease could be increased public awareness that it is a violation of law to attempt to carry a weapon aboard an aircraft. During this reporting period actions were taken to publicize the Civil Aviation Security Program throughout the country in an effort to reduce the number of weapons carried to airports and detected in the passenger screening process.

The system is not infallible. However, its effectiveness is clearly demonstrated by the fact that there has been only one successful hijacking of a U.S. air carrier since November 10, 1972. During this same period there have been 31 successful hijackings of foreign air carriers throughout the world.

Security Actions. The U.S. Civil Aviation Security Program involves airlines, airports, local communities, the Federal Government and passengers. This concept of shared responsibilities has produced a cooperative and effective program capable of meeting current security needs and of responding to the changing level and nature of future threats against civil aviation.

A complete revision of the regulation that established basic airport security requirements is currently underway. One of the more significant revisions under study is an alternative approach to the present requirement for law enforcement presence at each passenger screening point. The proposed change would allow officers to patrol airport terminals to provide broader deterrence and protection in addition to being able to respond quickly to needs at passenger screening points. Added benefits in more efficient utilization of police personnel are also anticipated at airports where this alternative is feasible.

Explosives detection dog teams were assigned to support five additional airports, bringing the number of airports having this support to 29. The strategic location of these teams provides readily available emergency support to

en route aircraft encountering bomb threats. The teams have maintained a 96.6% detection surety rate and a false alert rate of only 8.2%. To date, they have discovered 20 explosive items in the course of 1712 aircraft and airport searches.

The 1976 amendments to the Airport and Airways Development Act included a provision for compensating U.S. airlines for the costs incurred in complying with FAA security requirements in their international operations. A Notice of Proposed Rule Making to establish procedures for application and audit of claims will be published soon.

Fifty foreign air carriers were represented at an FAA-sponsored conference of air carriers subject to the security provisions of Federal Aviation Regulation Part 129. The meeting provided an excellent forum for the exchange of security information and ideas on the most effective measures to protect civil air commerce.

Research and development efforts that were accelerated after the tragic explosion at La Guardia Airport in December 1975 continued. Emphasis is being placed on producing equipment to efficiently and effectively detect explosives at airports in checked baggage, in cargo and on aircraft. A number of airport operational tests have been conducted and more are planned. In addition to research in explosives detection, analyses were made of the damage that occurs when explosives are detonated in airport coin lockers and of techniques and procedures that would reduce danger of deaths and injuries.

On April 15, the anti-hijacking agreement between the U.S. and Cuba was terminated. Termination was unfortunate because the agreement was effective in discouraging hijackings to Cuba and was an integral part of the U.S. policy of seeking to deny asylum to hijackers throughout the world. Termination of the agreement has not caused an increase in hijackings to Cuba. Indications are that Cuba continues to discourage hijackings as before.

Compliance and Enforcement. The Civil Aviation Security Program is implemented through a series of Federal Aviation Regulations and, as with any laws, the regulations are subject to both inadvertent and deliberate violations. During this reporting period, FAA completed 434 investigations involving alleged violations by airports, U.S. and foreign air carriers and by passengers. Thirty-six resulted in payments of civil penalties amounting to \$61,000.

Conclusion. The potential for crimes against civil aviation remains but the current U.S. Civil Aviation Security Program has demonstrated the capability of meeting and containing the present threat. Nevertheless, all parties involved must continue cooperative efforts to maintain this level of security and seek ways to improve the system. Passenger reactions indicate that the current security procedures are desired and expected in the interest of aviation safety.

III. CURRENT THREAT AGAINST CIVIL AVIATION

Aircraft hijackings and sabotage, including acts of terrorism, continue to threaten the lives and property of persons traveling in civil air commerce. The increasing number of worldwide hijackings during this reporting period indicates that the hijacking threat persists, and that effective and continuing civil aviation security measures remain necessary.

United States air carrier hijackings have evolved over the past two decades from those carried out by "homesick Cubans to those committed by fleeing criminals and, more recently, to those involving terrorists. In between have been hijackings by the mentally deranged, some of whom appeared bent on suicide; criminal extortionists who sought monetary gain; and politically motivated individuals protesting what they believed to be social and economic inequities of society or the "establishment." The first hijacking by an organized terrorist group against civil aviation in the U.S. occurred when a group of Croatian nationalists successfully commandeered a TWA jetliner on September 10, 1976. This was the only international terrorist-type hijacking in the U.S., and the only successful hijacking of a U.S. air carrier aircraft since November 10, 1972.

Acts of terrorism continue to pose a threat to civil aviation throughout the world. During the last few years, there has been an increasing degree of cooperation between terrorist organizations in various parts of the world. Alliances have been established which provided smaller terrorist groups the resources to undertake far more serious operations than they would normally be capable of conducting. This trend is evidenced by recently published reports that the government of Israel is holding two West Germans and three Arabs in connection with an alleged missile attack against an Israel airliner in Kenya in January 1976 and reports that a Dutch woman, suspected of making plans to hijack an Air France aircraft on a flight from Tel Aviv to Bombay, was arrested at Israel's Ben Gurion Airport. On the same day a friend of the woman was arrested in Bombay as he was about to board

an Air France flight to Tel Aviv. Reports indicated that these two, along with 11 other Dutch nationals, were trained in the use of arms and explosives in South Yemen by the Popular Front for the Liberation of Palestine and then sent on a reconnaissance mission to work out plans for the hijacking.

The greatest danger remains in Europe, the Middle East and South America where terrorist groups have strengthened their coordination and contacts with other groups, thus increasing the possibility of terrorism and other criminal acts against international targets, including acts by one organization on behalf of another. However, the fact that acts of terrorism can occur against aviation in the U.S. is illustrated by the bombing of Mackey Airlines' offices in Ft. Lauderdale, Florida, on May 25, 1977. An anti-Castro organization claimed credit for the incident and said the bomb was placed because Mackey was considering scheduled passenger flights to Cuba.

There was a significant increase in worldwide hijackings during this six-month reporting period. In the first half of 1977 there were 16 air carrier hijackings, 7 of which were successful, compared to a total of only 16 hijackings--7 successful--during all of 1976. The majority of these hijackings were against European and Middle East air carriers--only 2 involved U.S. airlines. In general, the hijackers were individuals seeking political asylum or were mentally unbalanced or suicidal. In the case of the non-U. hijackings, it appears that most of the weapons involved were introduced through the normal passenger boarding process and should have been detected and prevented from being carried aboard by effective passenger and carry-on baggage screening procedures.

With 3 more foreign air carrier hijackings during the first 10 days of July, bringing the 1977 total to 19, FAA issued an advisory bulletin to the international aviation community highlighting this recent upward trend and emphasizing the need for effective and ongoing screening procedures along with adequate training and supervision of screening personnel. This bulletin was followed by an offer to make available to other nations standards and procedures used by the U.S. to assure effective performance and operation of screening equipment.

The first six months of 1977 saw a total of 33 criminal acts against civil aviation resulting in 14 deaths and 42 injuries. Seventeen were hijackings (16 air carrier and 1 general aviation); 12 were explosions at airports, on aircraft or a

airline offices; 3 involved live explosive devices found at airports and on aircraft; and 1 other incident occurred on an aircraft. Six of the deaths and 36 of the injuries resulted from 5 sabotage acts--reinforcing the estimate that sabotage continues to pose a significant threat to the safety of persons traveling in air transportation. Eight of the 33 criminal acts, resulting in 1 death and 2 injuries, involved U.S. civil aviation.

By comparison, during the last six months of 1976 a total of 28 criminal acts involving civil aviation occurred worldwide resulting in 97 deaths and 124 injuries. Nine of these acts were hijackings; 11 consisted of explosions at airports, on aircraft, or at airline offices; 1 involved a live explosive device found at an airport; 1 was a terrorist attack at an airport; and 6 others involved aircraft or aviation facilities. Seven of the 28 criminal acts, resulting in 2 deaths and 4 injuries, involved U.S. civil aviation. Since 1974, worldwide criminal acts against civil aviation have resulted in 499 deaths and 463 injuries, with 112 deaths and 105 injuries involving U.S. civil aviation. (See Exhibits 1 & 2)

In the U.S., the absence of any successful air carrier or general aviation hijackings indicates that current security procedures remain effective. Aiding in maintaining this level of effectiveness, the Air Transport Association issued a security bulletin on June 8, 1977, noting that the summer season brings about an increase in passengers, baggage and visitors to the nations airports, and requesting industry review and updating of basic security procedures as necessary. Positive actions of this type by the aviation community have contributed greatly to the success of the U.S. Civil Aviation Security Program.

IV. INCIDENTS DURING REPORTING PERIOD

Hijackings, sabotage incidents and threats of criminal acts directed against U.S. civil aviation during the first six months of 1977 are described below:

Hijackings - There were two U.S. air carrier hijackings, both unsuccessful, and one unsuccessful U.S. general aviation hijacking.

- o Air Carrier Aircraft - In comparison to the two unsuccessful U.S. air carrier hijackings there were 14 foreign air carrier hijackings throughout

the world, 7 of which were successful. The 14 foreign hijackings are double the number reported during the last six months of 1976 and equal to the total for 1976. The significant increase in foreign hijackings during this reporting period is due in part to more hijackings of domestic flights which reportedly received poor or no preboard passenger screening. The number of U.S. and foreign air carrier hijackings increased 78% over the last six months of 1976 when there were two U.S. and seven foreign air carrier hijackings. (See Exhibits 3 &

- On January 11 a male passenger attempted to hijack a Trans World Airlines B-747 jetliner en route from New York to London. The man claimed to have a hand grenade and said he would blow up the plane if he was not taken to Uganda. It was subsequently determined that he was not armed and he was overpowered and restrained. The man was taken into custody when the aircraft landed in London and was subsequently returned to the U.S. on January 19, and arraigned in Federal court on charges of air piracy. Bond was set at \$50,000 and he was ordered to undergo a psychiatric examination.
- On May 8 an unsuccessful attempt was made to hijack a Northwest Airlines B-747 en route from Tokyo to Honolulu. A male passenger grabbed a uniformed airline employee, held a razor to her throat and demanded to talk to the captain about going to Moscow. The man was overpowered by crewmembers and restrained until the aircraft returned to Tokyo. After undergoing psychiatric tests the hijacker was deported to the U.S. on June 25. He has been charged with the Federal offense of air piracy and is being held under \$100,000 bond.
- o General Aviation Aircraft - Although current civil aviation security regulations do not extend to general aviation activities, hijackings of general aviation aircraft continue to be a matter of concern. During the first six months of 1977, there was one hijacking of a general aviation aircraft. During the previous reporting period--July-December 1976--there were no attempts. Although the hijacking during this reporting period was unsuccessful, the lives of innocent individuals involved were seriously jeopardized. (See Exhibit 4)

- On January 8 two men chartered a small aircraft for a flight from Statesville to Raleigh, North Carolina. En route, one of the men held a revolver to the pilot's head and ordered him to land. The man also threatened to shoot another passenger. The pilot touched down short of the runway causing substantial damage to the aircraft and, as the aircraft was rolling to a stop, he and the third passenger jumped from the aircraft and ran to a nearby house and called the police. The police responded immediately and apprehended the two very intoxicated men. Both were charged with the Federal offenses of air piracy and interference with flight crewmembers. Charges were dismissed against one because he had no active involvement and the other pleaded guilty to the charge of interference with the flight crew and was sentenced to four months in prison, five years probation and ordered to pay \$6,000 damages.

Aircraft/Airport Sabotage - Summaries of three sabotage incidents involving U.S. aircraft and airports during this reporting period follow:

- o On April 23 a custodial employee at Washington National Airport was killed by a bomb explosion in a locker room on the ground floor under the main terminal. Investigation indicates the bomb was contained in a small toolbox and exploded when the employee, apparently an unintended victim, opened the box. No suspects or motives have been identified and the investigation into the explosion is continuing.
- o On May 1 explosive devices damaged five helicopters in an aircraft parking area of the general aviation airport at Salinas, California. The helicopters, used in crop-dusting operations, received minor structural damage. Two other explosive devices were safely removed from another helicopter and a fixed-wing aircraft. Several days later a television station received an anonymous letter from a group opposed to crop-dusting operations who claimed responsibility for the bombing. Investigation is continuing.
- o On May 10 a bomb explosion injured an electronic maintenance man at Emanuel County Airport in Swainsboro, Georgia. The man had been called to the airport to repair navigational equipment and when he arrived he saw

a shoebox sitting on the ground in front of the door leading into the building housing the equipment. As he kicked the box away it exploded, seriously wounding him. No suspects have been apprehended.

Although not involving an airport or aircraft another significant incident occurred when a bomb damaged the offices of Mackey Airlines in Ft. Lauderdale, Florida:

- o On May 25 a bomb exploded outside the main office of Mackey Airlines in Ft. Lauderdale. The building was closed and vacant and no one was injured. The explosion caused approximately \$10,000 worth of damage. Shortly after the explosion an anti-Castro organization claimed credit for the incident and said the bomb was placed because Mackey was considering initiating commercial flights to Cuba. Mackey Airlines had been seeking to be the first to resume regular air service to Cuba.

Bomb Threats - For the second consecutive six-month reporting period, threats involving the use of explosives against aircraft and airports in the U.S. have decreased. There were 582 bomb threats reported against aircraft and 269 against airports during the first six months of 1977. These figures represent a 27% decrease from the 802 threats against aircraft and a 14% decrease from the 312 threats against airports reported in the last six months of 1976. Twenty-one of the threats during this reporting period were accompanied by extortion demands on the airlines or airports involved. (See Exhibits 6 & 7)

To obtain a more accurate picture of the significance of bomb threats, a distinction has been made between frivolous-type threats and the more serious threats. A separate analysis of serious threats, as defined in Exhibit 6, provides a more accurate account of the adverse effects on the aviation industry.

An analysis of bomb threats against aircraft from January - June 1977 indicates there were 293 in the serious category representing a 9% decrease from the 323 serious aircraft bomb threats reported in the last half of 1976. About 77% (225) of the serious threats were received telephonically. The others were made either verbally at screening points or other locations, or in written or visual forms. The threats against aircraft resulted in at least 110 reported flight delays or diversions and at least 200 aircraft searches, each contributing to passenger inconvenience and disruption

of airline operations. The threats were not concentrated against any particular airline--they involved 46 air carriers, including 21 foreign. Thirty-three, or about 11%, of the serious threats were directed against foreign air carriers in the U.S.

Almost all of the 269 bomb threats against airports had to be taken seriously since 93% were received under circumstances that made immediate evaluation difficult. These threats resulted in at least 30 evacuations of airport facilities, at least 200 searches and contributed to at least 10 air carrier flight delays. The threats involved 76 airports across the nation. Although the decrease in airport bomb threats appears to be significant, the extremely high number of threats received during the first half of 1976 must be considered. As indicated in Exhibit 7, there was a large increase in airport bomb threats in the first few months following the bombing at La Guardia Airport on December 29, 1975. This increase was due mainly to the nationwide publicity on that explosion. Since the La Guardia incident, bomb threats against airports have remained at a level higher than before.

Aircraft and airport bomb threats resulted in 27 reports of persons arrested under Federal or local statutes. Twenty-one resulted in local charges against the subjects and 6 in Federal charges. Four of the 6 Federal cases resulted in the individual being fined or confined; 1 case was dismissed and the prosecutive disposition of the remaining Federal case has not yet been reported. Two of the local cases resulted in fines and the prosecutive disposition of the remaining cases has not yet been reported.

Possible Hijackings or Related Crimes Prevented - The number of hijacking attempts or other crimes against civil aviation prevented or deterred as a result of airline and airport security procedures cannot be determined with certainty. However, the number of firearms detected at passenger screening points under suspicious circumstances and the number of individuals apprehended while attempting to gain unauthorized access to aircraft indicate that some of these individuals were intent on committing a crime. In at least two incidents it appears the individuals involved intended to commit a crime against aviation and were prevented from doing so by airline and airport security procedures. This makes a total of 72 possible hijackings or related crimes that may have been prevented since January 1974--strong evidence of the effectiveness of the security measures in use. The two incidents referred to in this reporting period are summarized as follows:

(See Exhibit 8)

- o After a male passenger alarmed a weapons detector, he was asked to remove any metal objects from his pockets and walk through the detector again. The passenger was also requested to remove a raincoat which had numerous metal buckles. He was reluctant to remove the coat but did so saying, "There's a clock in the pocket," and kept tugging at the coat trying to get it back from the airline screening agent. The coat contained a revolver loaded with five rounds of ammunition. When a police officer on duty at the screening point was called, the passenger became very belligerent and it was necessary for other officers to help subdue the man. He was arrested on local charges of carrying a concealed weapon. The man had numerous prior arrests and outstanding warrants on State charges. He made no statements and refused to be interviewed. Due to the many pending State charges, Federal prosecution was declined. Subsequent to his arrest, he was sentenced to nine months in jail on a previous charge.
- o A police officer on duty at a passenger screening point overpowered a man who came up behind the officer and tried to take the gun from his holster. Upon questioning, the man said he had planned to use the gun "to take a plane to the next city." The man had been arrested two days earlier for loitering at the airport. He was referred by the court to a mental health facility.

V. EFFECTIVENESS OF PASSENGER SCREENING PROCEDURES

The current passenger screening procedures involving the screening of all passengers and their carry-on items, coupled with the support of local law enforcement officers, continue to be an integral part of the defense against aircraft hijacking and sabotage. Equipment used by the airlines continues to consist of walk-through weapons detectors for individuals and x-ray inspection systems for carry-on items, especially at high-volume stations. Currently, 1108 walk-through weapon detectors and 495 x-ray baggage inspection systems are in use. Efforts are continuing to improve the screening equipment and to minimize passenger inconvenience.

(See Exhibits 9 & 10)

The screening procedures continue to be effective in preventing weapons and dangerous articles from being carried aboard aircraft. A recent study on Disorders and Terrorism conducted by the National Advisory Committee on Criminal Justice Standards and Goals and funded by the Law Enforcement Assistance Administration recognized this success saying that

"the success of the campaign against skyjacking must be attributed in large part to the law making it a Federal offense to carry a concealed weapon aboard an aircraft, the powers of search given by the law, and the thoroughness with which searches have been carried out." Passenger reactions continue to indicate that the screening procedures are desired and expected in the interest of aviation safety.

The system is not infallible. However, its effectiveness is clearly demonstrated by the fact that there has been only one successful hijacking of a U.S. air carrier since November 10, 1972. During this same period there have been 31 successful hijackings of foreign air carriers throughout the world. The outstanding U.S. record is even more impressive when it is considered that U.S. aviation activity is roughly equal to the activity of the rest of the free world combined.

As seen in Exhibit 3, the inception of the current passenger screening program in 1973 brought about a dramatic decrease in hijacking attempts against U.S. air carrier aircraft-- from 27 in 1972 to 1 in 1973. In 1974 there were 3 attempts against U.S. air carriers; in 1975 there were 6; in 1976 there were 2; and in the first six months of 1977 there were 2. In contrast to the foreign experience, none of these incidents were caused by actual firearms or explosives passing through passenger screening points. Since January 1973, over 14,000 firearms have been detected in the passenger screening process and over 10,000 arrests have been made.

Reporting and analytical procedures relating to the detection of items during the screening process are focused on those weapons and dangerous devices considered to present the greatest threat to aviation security. Specifically, the analysis concentrates on the detection of firearms and explosive/incendiary devices along with related intelligence, arrest and prosecutive information.

During this reporting period more than 243 million persons (passengers and non-passengers) were processed through airline screening points at the nations airports. The detection of 874 firearms, including 745 handguns, indicates a 20% decrease from the 1096 firearms reported detected during the last six months of 1976. The 745 handguns represents a 13% decrease from the 859 detected during the previous six-month period. Of the 745 handguns detected during this period, 586 (79%) were found by x-ray inspection of carry-on items, 84 (11%) by physical search of carry-on items and 75 (10%) by weapons detector screening of individuals. (See Exhibit 11)

It is not possible to determine precisely why there has been a decrease in the number of firearms detected but one reason could be increased public awareness that it is a violation of law to attempt to carry a weapon aboard an aircraft. The last Report to Congress included information on plans for an aggressive public education campaign in an effort to reduce the number of weapons carried to airports and detected in the screening process. During this reporting period actions were taken to publicize the Civil Aviation Security Program throughout the country. In addition, several local law enforcement agencies have initiated or are considering procedures to advise persons receiving permits for the carriage of a concealed weapon that the permit does not authorize them to take the weapon aboard an aircraft or into secure areas at airports. Such efforts to publicize the program will continue with particular emphasis on those airports which record higher numbers of firearms detections and arrests.

In 370 incidents, firearms were detected under circumstances which led to the arrest of individuals under Federal or local statutes. These 370 arrests occurred in the passenger screening operations of some 20 U.S. air carriers at 71 airports. Twenty-five large hub airports (e.g., Los Angeles and Atlanta) accounted for 232 or 63% of the arrests, and 20 medium hub airports (e.g., Memphis and Indianapolis) for 92 or 25%. The other 46 arrests occurred at 26 small and non-hub airports (e.g., Little Rock and Oakland).

The 370 reported firearms arrests include 359 cases in which local charges were filed and 11 cases in which Federal criminal charges were filed. Of the 359 local cases, 116 resulted in fines or penalties of confinement, probation or supervision. Charges were dismissed in 37 cases and the prosecutive disposition of the remaining 206 local cases has not yet been reported. The 11 Federal cases resulted in 4 convictions with sentences of confinement, fines, and/or probation. Four Federal cases were reported to have been dismissed and the disposition of the remaining 3 has not yet been reported.

VI. CIVIL AVIATION SECURITY ACTIONS

Airport and airline security measures continue to yield dividends in increased safety and protection for air travelers, air crewmembers, scheduled airlines and air carrier airports. These measures, based on Federal Aviation Regulations, currently involve 36 U.S. and 69 foreign airlines operating some 15,000 flights each day to or from 620 U.S. and foreign airports and enplaning some 585,000 passengers and 800,000 pieces of carry-on baggage daily. (See Exhibit 12)

The U.S. Civil Aviation Security Program is one of shared responsibilities involving airlines, airports, local communities, the Federal Government and the passengers. A basic policy guiding the program recognizes airline responsibilities for the safety of passengers, baggage and cargo in their care as well as for the safeguarding of their aircraft. Similarly, airport operators are responsible for maintaining a secure ground environment and for providing local law enforcement support for airline and airport security measures. And finally, with the inclusion of security costs in the operating expenses of U.S. air transportation systems, the passengers--ultimate beneficiaries of the security program--are directly involved in paying the costs in airline fares. This concept has produced a cooperative and effective program capable of meeting current security needs and responding to the changing level and nature of future threats against civil aviation. (See Exhibit 13)

During this reporting period, a number of significant actions were taken to maintain the high level of security for U.S. civil air commerce:

Airport Security - Airport operators continue to maintain a high standard of security awareness and vigilance at U.S. air carrier airports. Actions have continued to provide even better security and protection for people and property in airport facilities. Some of the contributing initiatives are highlighted below:

- o Federal Aviation Regulations (FAR) Part 107 - A Notice of Proposed Rule Making reflecting a complete revision of the current regulation was issued on June 10, 1977. The public comment period closed on August 15, 1977. Many refinements are proposed based on the more than four years experience. As indicated in the Report to Congress for the period July 1 - December 31, 1976, one of the more far-reaching proposals is an alternative approach to the requirement for fixed law enforcement presence at passenger screening points. Under the proposed rule, officers, under certain circumstances, could patrol airport terminals to provide broader deterrence and protection and still be able to respond quickly to needs at passenger screening points. Such arrangements should result in more efficient use of police personnel and also enhance overall terminal security.

Another proposed refinement would prohibit the introduction of illegal firearms, explosives, or incendiary devices into the airport. This civil prohibition would complement

existing criminal restrictions affected by local ordinances or by state or Federal statutes, and would provide a civil penalty as an alternative to established criminal penalties where such action is more suitable. This provision would not apply to weapons legally and properly being brought to or transported through an airport. The proposed rule also would establish qualifications and standards of training for law enforcement officers involved in airport security.

- o Financial Assistance for Airports - The Airport and Airway Development Act contains a number of provisions which provide for Federal financial assistance for the costs of certain security equipment. These provisions have enhanced the ability of airport operators to implement adequate security measures.

During the period July 1975 to September 1976, 73 separate security related projects received grants totaling slightly in excess of \$3,000,000. Construction of security barriers, lighting, signs, gates and alarm systems accounted for the majority of the projects.

- o Explosives Detection Dog Teams - During 1972 FAA, in cooperation with the Law Enforcement Assistance Administration (LEAA), sponsored a program to place specially trained explosive detection dog teams in key cities near strategically located major airports. The concept was to locate these teams so that this emergency support would be readily available to threatened aircraft flying over the United States. During 1976, 6 additional cities joined the program, and in the first six months of 1977, 5 more jurisdictions entered to bring the total number of airports covered to 29. One additional city is planned and should be in the program by the middle of FY-1978 bringing the total number of key airports covered to 30. To date, in actual explosive detection missions, the teams have discovered 20 explosive items in the course of 1712 aircraft and airport searches. In addition, they conducted 2290 explosive searches in their local communities, detecting 55 additional explosive items. (See Exhibit 14)

The teams undergo an annual proficiency evaluation to measure their ability in all phases of performance, thus assuring a high standard of explosive detection surety. The third annual evaluation completed in early 1977 revealed that the teams have maintained a 96.6% detection surety rate with a false alert rate of 8.2%.

Average search times ranged from 20 minutes for terminal building areas to 9 minutes for vehicles. Aircraft search time averaged 16 minutes, baggage areas 11 minutes and cargo areas 18 minutes. (See Exhibit 15)

- o Civil Aviation Security Training School - A special aviation security training program was established in 1973 at the Transportation Safety Institute in Oklahoma City. Although designed to benefit everyone involved in implementing aviation security measures, it is used primarily for local law enforcement officers assigned to support airline and airport security programs. The current 8-day course, funded by the LEAA, provides in-depth coverage of civil aviation security requirements, procedures and techniques, including the necessity for courtesy, efficiency, professionalism and caution in airline passenger screening operations.

Through June 30, 1977, 71 classes were conducted for 1686 students including 1197 local police officers, 229 FAA security personnel, 32 representatives of other U.S. Government agencies, 23 aviation industry officials and 205 foreign students. In addition to the formal classes at Oklahoma City, special 2-day seminars, attended by 770 persons, have been conducted at 11 airports located at key cities across the nation.

Also, the Transportation Safety Institute, in conjunction with the Department of State and the LEAA, conducted a 5-day course exclusively in the French language for security personnel from three West African countries.

Aircraft Security - The conscientious airline implementation of the procedures contained in the Air Carrier Standard Security Program has resulted in more efficient and uniform airline procedures and performance. The Standard Security Program, which was developed in coordination with the airlines, has been successfully used by U.S. air carriers since January 1976. The following additional steps were taken to supplement existing security measures and to promote increased effectiveness in industry-wide security procedures.

- o Charter Flight Operators - Recognizing that group charter operations and related procedures provide for "built-in" security safeguards which have adequately met the hijack threat--to date there has not been a hijacking of a U.S. group charter flight--Federal Aviation Regulations do not require security procedures for charter operations. In

light of recent changes in charter flight procedures and operations, several joint meetings were held between the industry and FAA to analyze security procedures currently in place and to determine any strengthening that may be needed. Meetings of this type are a continuing means of evaluating the adequacy of civil aviation security measures.

- o International Security Costs - A basic policy guiding development of the U.S. Civil Aviation Security Program has been the recognition of security costs as integral elements of total airline operating costs. Based on this concept, security costs are generally recovered through the fare structure as are other operating costs--fuel, equipment, wages, etc. In 1973 the Civil Aeronautics Board recognized this concept in authorizing security costs as an integral part of the terminal element of the fare formula. For routes within the 48 contiguous states, airlines were authorized to increase fares up to 41 cents per originating passenger. Other rates of increase applied to Alaskan and Hawaiian traffic.

These CAB actions did not apply to international enplanements in the U.S. or elsewhere. Recognizing that U.S. flag carriers did not have an explicit mechanism to recover costs incurred in complying with FAA security requirements in their international operations, the 1976 ADAP amendments included provisions for compensating U.S. airlines, upon their request, for these costs. Eighteen U.S. airlines would be eligible for compensation under the 1976 law when money is appropriated for that purpose.

A Notice of Proposed Rule Making to establish procedures for application and processing of reimbursement claims and related audit procedures to assure equitable reimbursement is in preparation and will be published in the near future.

- o Foreign Air Carriers - Beginning in October 1975, certain foreign air carriers operating scheduled passenger flights to and from the U.S. were required by Federal Aviation Regulation to adopt and implement security programs similar to those in effect for U.S. scheduled airlines. There have been no hijackings of aircraft engaged in flights subject to this requirement.

In February 1977, FAA sponsored a conference of air carriers subject to the security provisions of FAR Part 129. Over 125 persons attended, including representatives of 50 foreign air carriers. Fifty-two nations were represented in addition to the International Civil Aviation Organization, the International Air Transport Association and the Association of European Airlines. The purpose of the meeting was to provide a forum for the exchange of security information and ideas on the most effective and efficient measures to protect civil air commerce. The consensus of participants was that the threat of criminal and terrorist attacks against civil aviation continues and that there is a need for continuing conferences of this type.

Research and Development - Following the La Guardia bombing in December 1975, research and development efforts were accelerated to produce a future generation of equipment and techniques to efficiently and effectively detect explosives at airports, in checked baggage, in cargo and on aircraft. Guiding principles are that new equipment and procedures must be quick and effective. They must be reliable, easily maintained and operable by relatively unskilled personnel. They must not present any hazards to persons or the environment or damage luggage or its contents, and airports, airlines and passengers must also be able to afford them.

All known systems and methods for detecting explosives are being explored. The following techniques are currently being pursued:

- o X-Ray Absorption - An x-ray absorption concept (automatic computer based analysis of the size, shape and x-ray opacity of checked baggage contents) is being studied. Two experimental models have been built and used at Washington National and Newark International Airports to gather data on checked baggage. Based on the analysis of this data, a detection rate of over 90% with a corresponding false alarm rate in the vicinity of 10% is being predicted. Limited operational testing of these units will begin in the Fall of 1977. In addition, three preproduction prototype systems will be procured for further testing and evaluation.
- o Nuclear Magnetic Resonance - The technical feasibility of the Nuclear Magnetic Resonance techniques (detection of a characteristic response of explosive molecules when they are subjected to pulsed magnetic and radio frequency

fields) has been demonstrated with an experimental system. Actions are underway to develop an operational prototype system for airport test and evaluation.

- o Thermal Neutron Activation - The technical feasibility of the thermal neutron activation technique (identification of explosives by means of the unique nuclear reaction of the nitrogen atoms present in explosives) has also been demonstrated. Further plans call for the design and fabrication of a prototype system for evaluation in the airport environment.
- o X-Ray Fluorescence - A study contract has been initiated to evaluate the x-ray fluorescence concept (excitation of unique fluorescent reradiation from blasting caps due to normal constituents or added materials). Further development of this technique will depend on the results of this study contract.
- o Vapor Detection - All commercially available electron capture explosive vapor detectors have been evaluated at the Transportation Systems Center. The results indicate that this type of detector cannot be used to process checked baggage in an airport environment. As a follow-on, a longer range program is underway to identify the types and quantities of unique vapors associated with different types of explosives. (See Exhibit 16)
- o Explosion Effects Testing - In addition to the research and development in the area of explosives detection, another project was initiated to obtain a better understanding of the damage that occurs when explosives are detonated in airport coin lockers. The preliminary tests to quantify the damage associated with these explosions have been completed. Locker modifications to reduce the hazard potential, barriers to stop bomb related fragments and coatings for glass to reduce sharding have been identified and are being proof tested.
- o In-Flight Explosive Security - Efforts to develop in-flight emergency safety procedures for flight crewmembers when they encounter suspected explosive devices on board during flight are continuing. Studies indicating specific procedures for various aircraft have been published and disseminated to user air carriers.

International Activities - Recognizing the national interest in the safety of U.S. registered aircraft and U.S. citizens flying abroad, the U.S. Government and aviation industry representatives continued efforts to seek implementation of effective civil aviation security programs by all nations.

Since 1970 there has been substantial improvement in aviation security measures throughout the world resulting in increased protection of civil aviation and its users from criminal acts that threaten their safety. Many governments have developed and implemented effective aviation security programs and the results are reflected in worldwide hijacking statistics. During 1970 and 1971, there were 141 hijacking attempts worldwide; whereas in 1974 and 1975, this figure was reduced to 51. During 1976, there was a total of 18. However, the number of hijackings increased to 17 during the first six months of 1977. The majority of the hijackings in this reporting period involved European and Middle East air carriers. Most of the hijacked flights were domestic which received no or poor preboard passenger screening. Most of the weapons involved in these hijackings were introduced during the course of passenger boarding and might have been detected by effective passenger and carry-on item screening procedures.

International organizations such as ICAO, IATA, INTERPOL, and the European Civil Aviation Conference are continuing collective efforts to achieve common and high security standards and to assure close cooperation between aviation security and law enforcement authorities in countries throughout the world. The FAA was represented as a member of the U.S. delegation in the Americas INTERPOL Conference in March. The purpose of the conference was to discuss criminal activities of international interest and to plan and coordinate programs and measures to deal with these problems. Two days of the conference were devoted almost exclusively to aviation security with most of the emphasis being given to hijackings and aircraft sabotage.

- o Cancellation of Anti-Hijacking Agreement with Cuba - On April 15, the anti-hijacking agreement between the U.S. and Cuba was terminated. Cuban Prime Minister Castro renounced it in October 1976 when he alleged U.S. complicity in the bombing of a Cuban airliner off the coast of Barbados in which 73 passengers and crewmembers were killed. Termination of the agreement was unfortunate because the agreement was effective in discouraging hijackings to Cuba and was an integral part of this country's policy of seeking

to deny asylum to hijackers throughout the world. However, encouragement can be taken from Prime Minister Castro's statement that "Cuba will never encourage air hijacking or put up with its perpetrators."

- o Civil Aviation Security Seminar - On May 3-5, FAA sponsored a Civil Aviation Security Seminar in San Juan, Puerto Rico, to discuss regional security problems and goals in the Caribbean area. The seminar was attended by officials of 12 countries. Such seminars have proven to provide an excellent forum to seek improvements in the application of aviation security measures.
- o Foreign Technical Assistance - In addition to multi-lateral efforts such as those indicated above, FAA continues to pursue a bilateral program of technical assistance and exchange of information. These activities include technical teams to provide advice and assistance to foreign nations in development and/or improvement of civil aviation security programs. The technical teams generally are funded through an Interagency Agreement with LEAA which provides funds for visits to a limited number of countries. At the request of the government of Ecuador, a team visited that country and assisted in conducting a security survey of two major airports and provided written reports with suggestions for security improvements. The team also conducted training seminars and provided technical assistance on civil aviation security procedures. To date, technical assistance teams have visited 17 countries.

Also available are in-depth briefings on all aspects of civil aviation security for foreign aviation and law enforcement officials. Officials from 63 countries have been provided these technical briefings. Also, a number of audiovisual training presentations have been developed and made available to many officials of foreign airlines and governments. (See Exhibit 17)

VII. COMPLIANCE AND ENFORCEMENT

The Civil Aviation Security Program is implemented through a series of Federal Aviation Regulations and, as with any laws, the regulations are subject to both inadvertent and deliberate violations. The FAA approach is to prevent violations to the greatest extent possible by fostering an atmosphere of cooperation and voluntary compliance to promptly correct any deficiencies and weaknesses.

Nevertheless, there are occasional incidents involving failures to comply. These are investigated and appropriate corrective actions taken including issuance of Warnings, Letters of Correction or, in more serious cases, assessment of civil penalties.

During the first six months of 1977, FAA completed 434 investigations involving alleged violations of security regulations by airports, U.S. and foreign air carriers, and by passengers. Thirty-six resulted in payments of civil penalties amounting to \$61,000; 292 were closed with administrative corrective action, including 191 Warnings issued to air carriers and airport operators. In 106 cases, the alleged violations were not substantiated and no enforcement actions were taken. (See Exhibit 18)

VIII. OUTLOOK

The understanding and cooperation of the traveling public in accepting the security measures required to assure safe air travel has contributed immeasurably to the success of the Civil Aviation Security Program. The concerted efforts of the aviation industry, particularly air carriers and airport operators, in carrying out the security procedures have assured industry-wide consistency and efficiency. The potential for crimes against civil aviation remains but the current U.S. Civil Aviation Security Program has demonstrated the capability of meeting and containing the present threat. Nevertheless, all parties involved must continue cooperative efforts to maintain this level of security while at the same time working toward maximum efficiency and minimum inconvenience in scheduled commercial air travel.

There has been substantial improvement in aviation security measures throughout the world in the last several years. Nevertheless, the significant increase in worldwide hijackings during this six-month period reinforces the possibility of individuals or groups exploiting the air transportation system for their own ends. International cooperation and combined government-industry efforts are necessary to respond effectively to this threat. The U.S. will continue to support and seek adoption of measures to improve the effectiveness and efficiency of international aviation security standards.

CIVIL AVIATION SECURITY **THE THREAT TO U.S. AVIATION**

	1961-7	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977*
Hijackings	12	22	40	27	27	31	2	7	12	4	3
Explosions:											
Aircraft	2	1	1	2	1	1	2	3	2	2	1
Airports						2	2	4	4	2	2
Explosive											
Devices Found:											
Aircraft					1	2	2	1	1	1	1
Airports					5	5	3	11	5	3	0
Bomb Threats To:											
Aircraft			400	601	1145	2156	1383	1453	1853	1950	582
Airports					212	288	239	387	449	1036	269

*As of 7/1/77

ACS-20
7/1/77
EXHIBIT 1

Worldwide Criminal Incidents Involving Civil Aviation

	<i>Deaths</i>	<i>Injuries</i>	<i>Hijackings</i>
1970	92	32	83
1971	31	9	58
1972	159	96	62
1973	104	75	22
1974	170	59	26
1975	88	162	25
1976	227	200	18
1977★	14	42	17

★ As of 7-1-77

EXHIBIT 2

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As Of: 7/1/77

SUCCESSFUL HIJACKING U.S. AIRCARRIER AIRCRAFT

Year	Quarterly Hijacking Attempts	Success Percentage
1967	1	0%
1968	4	40%
1969	6	75%
1970	7	82%
1971	8	88%
1972	9	44%
1973	10	30%
1974	1	0%
1975	1	0%
1976	4	0%
1977	1	0%

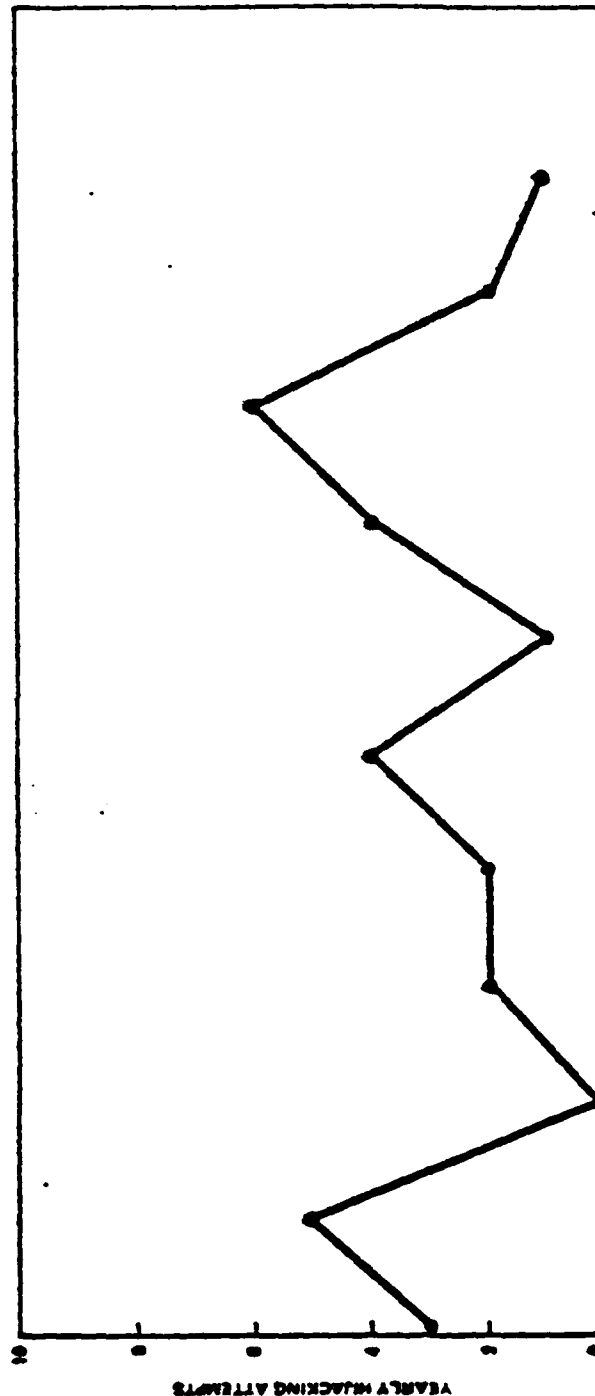
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Updated By: ACS
Source: ACS 20

Department of Transportation
Federal Aviation Administration

Month: 01/77
Updated: 01/77
As Of: 7/1/77

HIJACKING ATTEMPTS ON U.S. GENERAL AVIATION AIRCRAFT



CV	Prior 1968	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	TOTAL
TOTAL	3	6	0	2	2	4	1	4	0	2	1	20
Successful	3 (100%)	6 (100%)	0	2 (100%)	2 (100%)	2 (50%)	1 (100%)	3 (75%)	0 (0%)	0 (0%)	0	20 (100%)
Unsuccessful	0	0	0	0	0	0	0	1 (25%)	0 (0%)	2 (100%)	1 (100%)	4 (20%)

GENERAL AVIATION HIJACKING ATTEMPTS SINCE JANUARY 1, 1978											
Aircraft				Location				Outcome			
Model	Year	Manufacturer	Registration	Country	City	State	Country	Successful	Unsuccessful	Total	Percentage
Boeing 737	1978	Boeing	N11111	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11112	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11113	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11114	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11115	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11116	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11117	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11118	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11119	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11120	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11121	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11122	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11123	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11124	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11125	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11126	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11127	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11128	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11129	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11130	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11131	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11132	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11133	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11134	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11135	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11136	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11137	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11138	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11139	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11140	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11141	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11142	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11143	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11144	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11145	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11146	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11147	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11148	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11149	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11150	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11151	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11152	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11153	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11154	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11155	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11156	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11157	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11158	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11159	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11160	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11161	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11162	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11163	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11164	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11165	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11166	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11167	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11168	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11169	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11170	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11171	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11172	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11173	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11174	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11175	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11176	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11177	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11178	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11179	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11180	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11181	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11182	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11183	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11184	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11185	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11186	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11187	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11188	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11189	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11190	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11191	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11192	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11193	USA	Atlanta	GA	USA	1	0	1	100%
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Boeing 737	1978	Boeing	N11195	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11196	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11197	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11198	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11199	USA	Atlanta	GA	USA	1	0	1	100%
Boeing 737	1978	Boeing	N11200	USA	Atlanta	GA	USA	1	0	1	100%

1/ Hijacking in which hijacker is apprehended/ killed during hijacking or as a result of "hot pursuit."

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HIJACKING ATTEMPTS ON U.S. AND FOREIGN AIRCRAFT

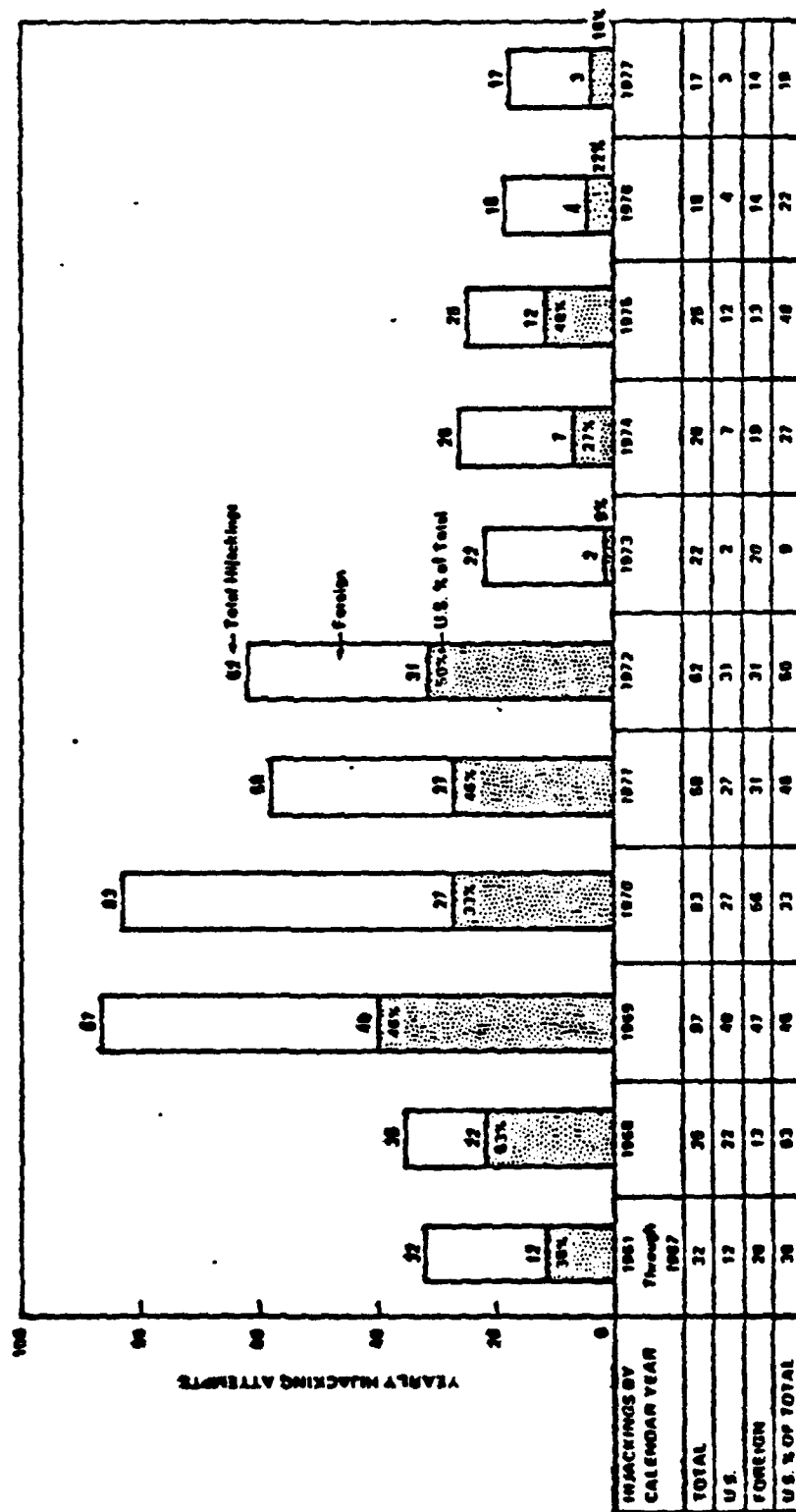


EXHIBIT 5

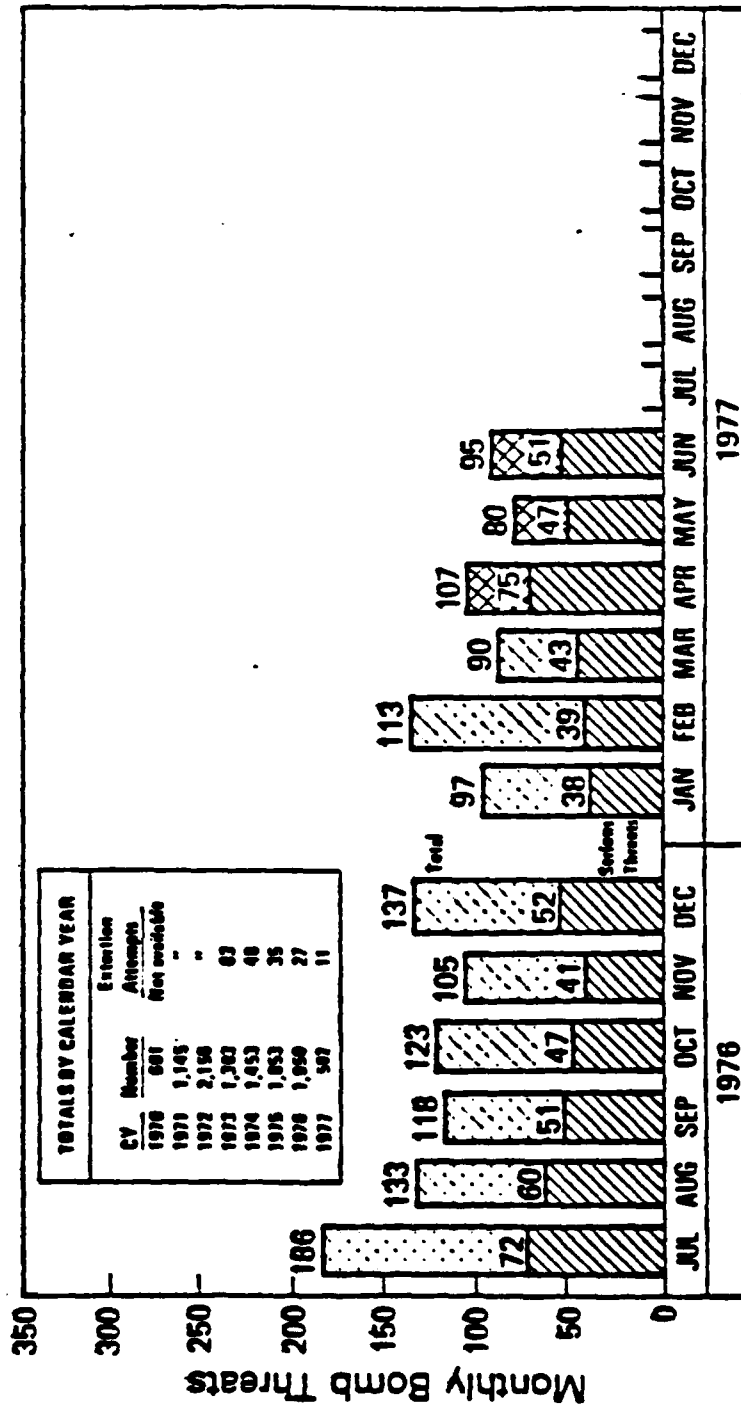
Updated By: ACS
Source: ACS-26

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

Issued: 04/77
Updated: Monthly
As Of: 11/77

BOMB THREATS AGAINST U.S. AIRCRAFT AND FOREIGN AIRCRAFT IN THE U.S.

Number



ANALYSIS

A statement is considered a serious threat if one of the following occurs:

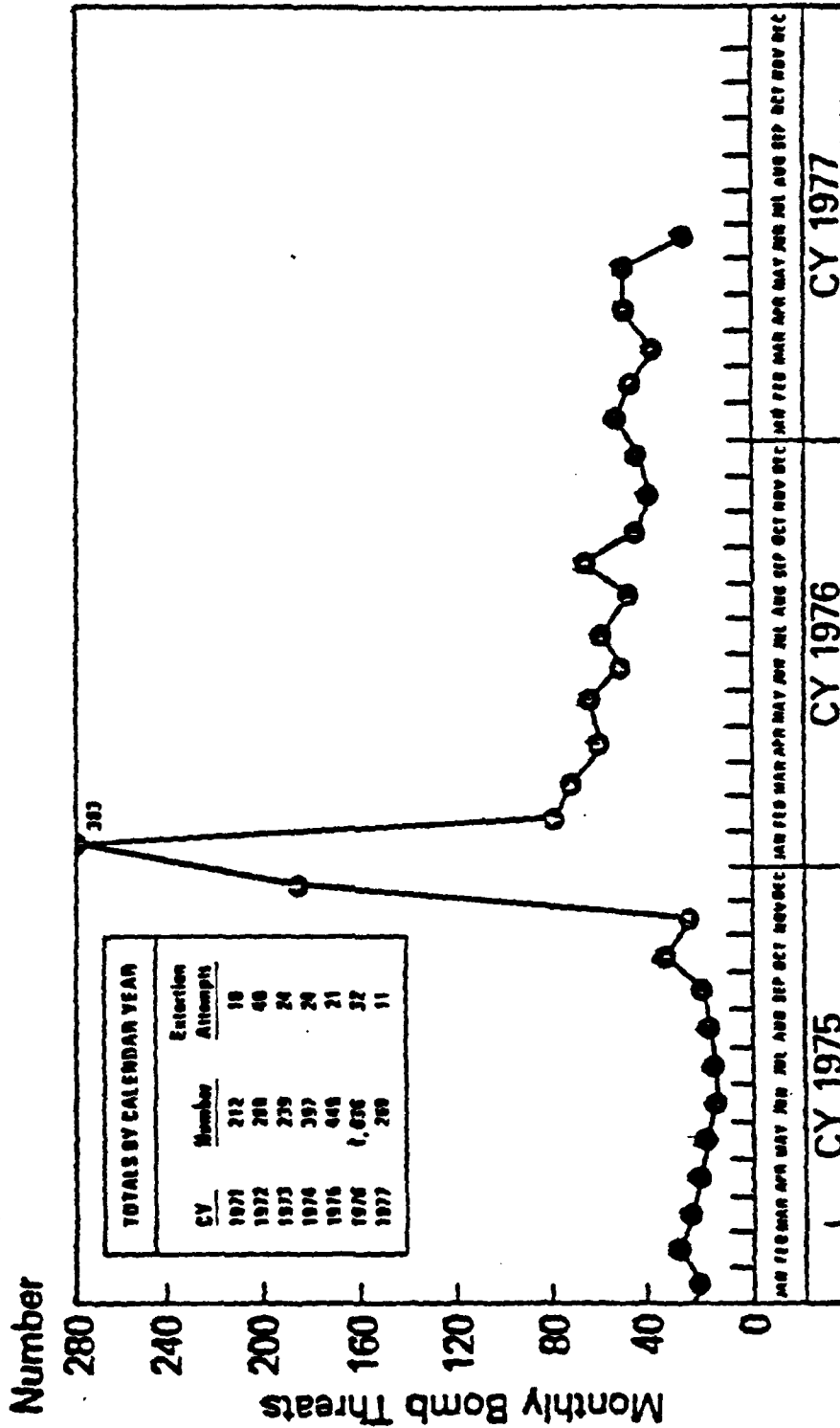
1. It is directed against a particular aircraft or flight.
2. It is not possible to immediately determine if it is made in a joking manner.
3. It results in interference to other passengers.
4. It results in a search or otherwise disrupts airline operations.

DEPARTMENT OF TRANSPORTATION
Federal Aviation Administration

BOMB THREATS AGAINST U.S. AIRPORTS

Issued: 8/1/77
Updated: Monthly
As of: 7/1/77

Updated by: ACS
Source: ACS-20



ANALYSIS

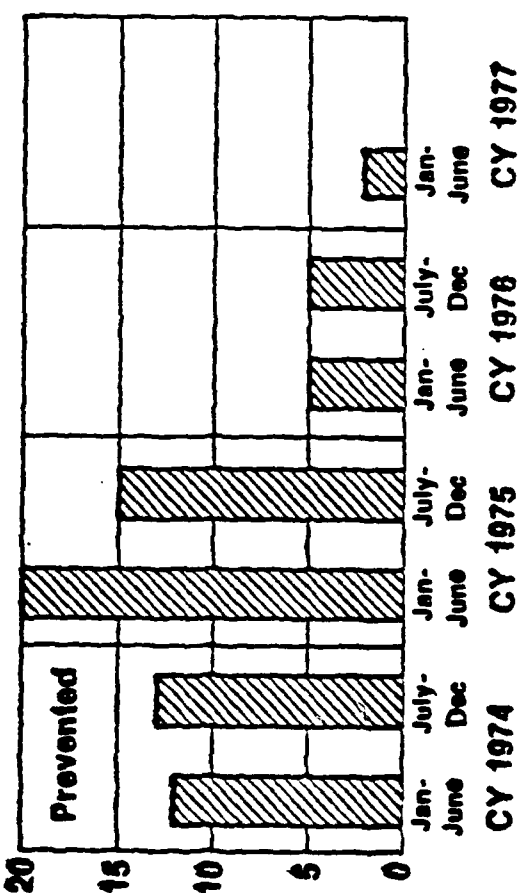
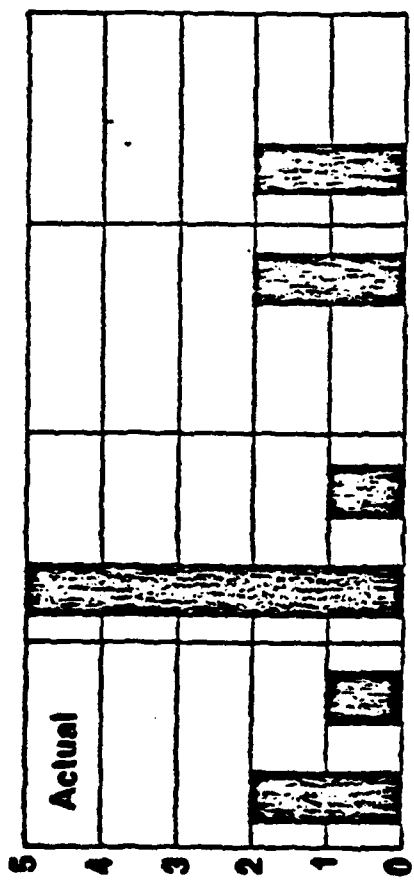
The significant increases in threats in December 1975 and January 1976 is the result of an explosion at La Guardia Airport on December 29, 1975.

EXHIBIT 7

PREVENTED ATTEMPTS & ACTUAL HIJACKINGS **U.S. AIR CARRIER AIRCRAFT)**

Prevented Attempts

Incidents in which it appeared the individuals involved intended to hijack an aircraft but were prevented from doing so by security procedures.



Means of Access — Point Of Detection				
	1974	1975	1976	1977
Screening Point	13	22	10	4
Air Operations Area	4	9	1	0
Terminal	4	4	1	0
Other	7	6	0	0

Weapons Summary							
	1974		1975		1976		1977
	Alleged	Real	Alleged	Real	Alleged	Real	Real
Firearm	2	16	1	22	0	11	0
Explosive Device	2	1	0	0	1	0	1
Other	0	6	0	13	0	0	1

CIVIL AVIATION SECURITY WEAPON DETECTION DEVICES

<u>Type</u>	<u>Basic Characteristics</u>	<u>Manufacturer</u>	<u>Units</u>
Walk-Thru Active	Creates and Measures Deviations in Own Electric Field. Detects Both Ferrous And Non- Ferrous Metals.	RENS	641
		Infinetics	195
		Metor	131
		Solco	69
		Westinghouse	40
		Sperry Rand	30
		Sentrie	2
		Total	1108
Hand-Held Active	Comparable To Walk- Thru Active Limited Effective Range.	Rens	230
		Federal	250
		Solco	720
		Total	1200

Total -- All Types -- 2308

ACS-200
7/1/77
EXHIBIT 9

CIVIL AVIATION SECURITY
X-RAY BAGGAGE INSPECTION SYSTEMS

Characteristics:

Small Dose X-Ray, Intensity Image Electron-ically, Display on TV

Operating Criteria:

Meet FDA/BRH and State Health Standards
Distinguish 24 Gauge Wire

Limitations:

Dependent on Diligence of Operators, Demands Constant Attention and Ability to Quickly Recognize Dangerous Article

Systems In Use:

Astrophysics	203
Bendix	91
Phillips Electronic Instruments	84
American Science & Engineering	52
Dennis & Miller	34
New Security Concepts	31
Total:	<u>495</u>

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7/1/77

CIVIL AVIATION SECURITY

AIRLINE PASSENGER SCREENING RESULTS

1976 - 1977

	1976		1977	
	<u>Jan—June</u>		<u>July—Dec</u>	
<u>Persons Screened (Millions)</u>	191.1	222.5	243.1	
<u>Weapons Detected</u>				
Firearms	2840	1096	874	
(1) Handguns	1054	859	745	
(2) Long Guns	101	35	24	
(3) Other	1685	202	105	
Explosive/Incendiary Devices	7	1	2	
<u>Persons Arrested</u>				
For Carriage of Firearms/Explosives	422	462	370	
For Giving False Information	119	37	23	
<u>Other Offenses Detected</u>				
Narcotics	176	156	156	
Illegal Aliens	382	416	474	
Other	734	415	151	

Source — Monthly Reports Of Passenger
Screening Activities At
U.S. Airports

CIVIL AVIATION SECURITY

	<u>U.S.</u>	<u>FOREIGN</u>	<u>TOTAL</u>
Carriers	36	69	105
Airports	450	170*	620
Aircraft	2,600	—	—
Flights Per Day	14,500	500	15,000
Passengers Per Day	550,000	35,000	585,000
Carry-On Items Per Day	750,000	50,000	800,000

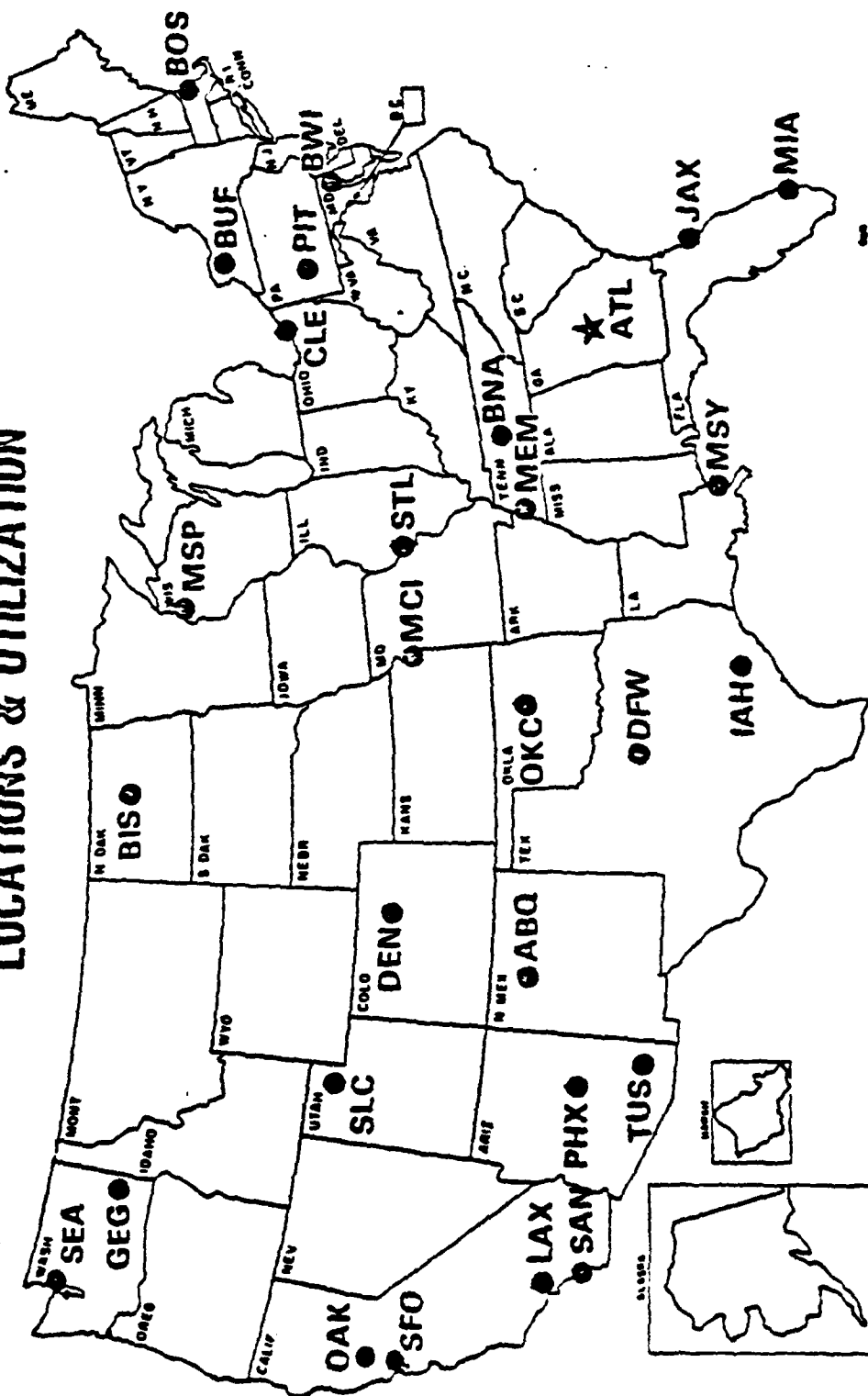
* Foreign Airports Served By U.S. Carrier And/Or Final Departure Point For Foreign Carrier Flights To The U.S.

7/1/77
EXHIBIT 12

CIVIL AVIATION SECURITY BASIC POLICIES

<u>PROGRAM ELEMENT</u>	<u>RESPONSIBILITY</u>	<u>ACTIONS</u>
AIR CARRIERS	SECURE TRAVEL	<ul style="list-style-type: none"> • MAINTAIN RESPONSIVE SECURITY PROGRAMS • SCREEN PASSENGERS, CARRY-ON ITEMS • SECURE BAGGAGE, CARGO PROCEDURES • PROTECT AIRCRAFT
AIRPORTS	SECURE OPERATING ENVIRONMENT	<ul style="list-style-type: none"> • MAINTAIN RESPONSIVE SECURITY PROGRAMS • PROTECT AIR OPERATIONS AREA • PROVIDE LAW ENFORCEMENT SUPPORT
FAA	LEADERSHIP	<ul style="list-style-type: none"> • IDENTIFY AND ANALYZE THREAT • PRESCRIBE SECURITY REQUIREMENTS • COORDINATE SECURITY OPERATIONS • PROVIDE TECHNICAL ASSISTANCE • ENFORCE REGULATIONS
USERS	PROGRAM COSTS	<ul style="list-style-type: none"> • SECURITY FUNDED AS OPERATING COST OF SYSTEM

FAA SPONSORED EXPLOSIVE DETECTION K9 TEAMS LOCATIONS & UTILIZATION



TOTAL AIRCRAFT & AIRPORT SEARCHES
TOTAL EXPLOSIVE ITEMS DETECTED
TOTAL MISSIONS IN LOCAL COMMUNITIES
TOTAL EXPLOSIVE ITEMS DETECTED

↓ DEN ENTIRE LOCATION

1712
20
2290
75

SJU●

AS OF: 7/1/77
EXHIBIT 1A

EXPLOSIVE DETECTION K9 TEAM EFFECTIVENESS

Average Search Times Required

Aircraft	16 Minutes
Terminal Buildings	20 Minutes
Vehicles	9 Minutes
Cargo Areas	18 Minutes
Baggage Areas	11 Minutes

Reacted to Explosive Plants — 96.6%
False Alerts — 8.2%

**CIVIL AVIATION SECURITY
RESEARCH AND DEVELOPMENT
CHECKED BAGGAGE EXPLOSIVE DETECTION**

X-RAY ABSORPTION

Prototype Carry-On Baggage System Tested

Two Units Designed For Checked Baggage Being Built

- First Unit Tested Nov 76
- Second Unit Available April 77

Operational Test Fall 1977

THERMAL NEUTRON ACTIVATION

Feasibility Demonstration Completed

Prototype Unit Being Designed For Evaluation

NUCLEAR MAGNETIC RESONANCE

Technical Feasibility Has Been Demonstrated

Prototype Unit Being Developed For Evaluation

VAPOR DETECTION

Transportation Systems Center Has Evaluated All Commercially Available Detectors. Program Underway To Identify Unique Vapors Associated With Different Types Of Explosives.

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CIVIL AVIATION SECURITY FOREIGN TECHNICAL ASSISTANCE

<u>ACTIONS</u>	<u>COUNTRIES PARTICIPATING</u>
• FAA Technical Assistance Team Visits	17
• Aviation/Law Enforcement Officials Briefings	63
• Training Programs:	
— TSI Course (Students)	(60) (205)
— Antihijacking Tactics	25
— Ground Explosive Procedures	59
— Inflight Explosive Procedures	72
• Analytical Studies Distribution	13

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7/1/77
EXHIBIT 17

DATE
FILMED
8-8